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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ARI IKONEN, PEKKA HEINONEN, and HARRI OKKONEN

Appeal 2008-3693
Application 09/587,959
Technology Center 2400

Decided: November 17, 2008

Before ROBERT E. NAPPI, SCOTT R. BOALICK, and JOHN A.
JEFFERY, *Administrative Patent Judges*.

NAPPI, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 6(b) of the final
rejection of claims 34 through 37.

We affirm the Examiner's rejections of these claims.

INVENTION

The invention is directed towards a system of connecting a mobile station (item “MS” in Figure 1, which is, for example, a portable computing device such as an electronic game or Personal Digital Assistant (PDA)) to a television. The connection is made using a low power radio frequency link between the mobile station and an adaptor (item “M1”) connected to the television. See pages 2, 3 and Figure 1 of Appellants’ Specification. Claim 34 is representative of the invention and reproduced below:

34. A method for transferring image and sound data from a mobile phone to a television, comprising:
- generating a signal in the mobile phone from the image and sound data received by the mobile phone;
 - transmitting the signal in a format that conforms to a Bluetooth-protocol as an output signal from the mobile phone;
 - receiving the output signal from the mobile phone as an input signal at a module;
 - converting the input signal to image-sound signals in the module;
 - and
 - connecting the image-sound signals from the module to the television, wherein the module is a mobile telephone accessory located at the television.

REFERENCES

Tran	US 6,202,060 B1	Mar. 13, 2001 (filed Oct. 29, 1996)
Heinonen	EP 0804030 A2	Oct. 29, 1997

REJECTION AT ISSUE

The Examiner has rejected claims 34 through 37 under 35 U.S.C. § 103(a) as being unpatentable over Heinonen in view of Tran. The Examiner's rejection is on pages 3 through 6 of the Answer.¹

ISSUE

Appellants argue, on pages 5 through 8 of the Brief,² that the prior art does not teach or suggest modifying the device of Heinonen to make use of communication with the phone using the Bluetooth protocol. Appellants reason, on pages 5 and 6 of the Brief, that the Examiner's conclusion that using Bluetooth in Heinonen is obvious relies upon impermissible hindsight. Further, Appellants argue that there is no motivation to modify Heinonen to use Bluetooth protocol because the combination would require added complexity and offer no advantage because one of the purposes of Heinonen's system is to reduce complexity. Brief 7, 8; Reply Brief, 3, 4. Appellants assert that "it was important to Heinonen that his system include a *unitary* adaptor that functioned *both* for transmission of power to recharge the mobile telephone battery, *and* as a communications link." Reply Brief 5. Thus, Appellants conclude that one would not separate the functions of charging and providing a communications pathway, and one would not use Bluetooth protocol as it is not capable of transmitting power. Reply Brief 5 and 6.

¹ Throughout the opinion we refer to the Answer mailed August 10, 2007.

² Throughout the opinion, we make reference to the Brief, received April 19, 2007 and the Reply Brief, received October 10, 2007.

Appellants' contentions thus present us with the following issue: did the Examiner err in concluding that it would have been obvious to modify Heinonen to use a wireless protocol such as Bluetooth?

PRINCIPLES OF LAW

"Section 103 forbids issuance of a patent when 'the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.'" *KSR Int'l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1734 (2007). The question of obviousness is resolved on the basis of underlying factual determinations including (1) the scope and content of the prior art, (2) any differences between the claimed subject matter and the prior art, and (3) the level of skill in the art. *Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966). *See also KSR*, 127 S. Ct. at 1734 ("While the sequence of these questions might be reordered in any particular case, the [*Graham*] factors continue to define the inquiry that controls."). "If a court, or patent examiner, conducts this analysis and concludes the claimed subject matter was obvious, the claim is invalid under § 103." *KSR*, 127 S. Ct. at 1734.

The mere existence of differences between the prior art and the claim does not establish nonobviousness. *Dann v. Johnston*, 425 U.S. 219, 230 (1976). The issue is "whether the difference between the prior art and the subject matter in question 'is a difference sufficient to render the claimed subject matter unobvious to one skilled in the applicable art.'" *Dann*, 425 U.S. at 228 (citation omitted) (finding system for automatic record keeping

of bank checks and deposits obvious in view of nature of extensive use of data processing systems in banking industry and "closely analogous" patent for an automatic data processing system used in a large business organization for keeping and updating system transaction files for each department of the organization). To be nonobvious, an improvement must be "more than the predictable use of prior art elements according to their established functions." *KSR*, 127 S. Ct. at 1740.

In *KSR*, the Supreme Court emphasized "the need for caution in granting a patent based on the combination of elements found in the prior art," *id.* at 1739, and discussed circumstances in which a patent might be determined to be obvious. In particular, the Supreme Court emphasized that "the principles laid down in *Graham* reaffirmed the 'functional approach' of *Hotchkiss*, 11 How. 248 [(1850)]." *KSR*, 127 S. Ct. at 1739 (citing *Graham v. John Deere Co.*, 383 U.S. 1, 12 (1966) (emphasis added)), and reaffirmed principles based on its precedent that "[t]he combination of familiar elements according to known methods is likely to be obvious when it does no more than yield predictable results." *Id.* The Court explained:

When a work is available in one field of endeavor, design incentives and other market forces can prompt variations of it, either in the same field or a different one. If a person of ordinary skill can implement a predictable variation, § 103 likely bars its patentability. For the same reason, if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.

Id. at 1740. The operative question in this "functional approach" is thus "whether the improvement is more than the predictable use of prior art elements according to their established functions." *Id.* at 1740.

The Supreme Court made clear that:

[f]ollowing these principles may be more difficult in other cases than it is here because the claimed subject matter may involve more than the simple substitution of one known element for another or the mere application of a known technique to a piece of prior art ready for the improvement.

KSR, 127 S. Ct. at 1740. The Court explained that:

[o]ften, it will be necessary . . . to look to interrelated teachings of multiple patents; the effects of demands known to the design community or present in the marketplace; and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue.

Id. at 1740-41. The Court noted that "[t]o facilitate review, this analysis should be made explicit." *Id.* at 1741 (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006) ("[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness")). However, "the analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of

ordinary skill in the art would employ." *Id.* Further the Court stated "the obviousness analysis cannot be confined by a formalistic conception of the words teaching, suggestion, and motivation." *Id.* The Court cautioned that "[a] factfinder should be aware, of course, of the distortion caused by hindsight bias and must be cautious of arguments reliant upon *ex post* reasoning." *Id.* at 1742.

The Court noted that "[i]n many fields it may be that there is little discussion of obvious techniques or combinations, and it often may be the case that market demand, rather than scientific literature, will drive design trends." *KSR*, 127 S. Ct. at 1741. "Under the correct analysis, any need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed." *Id.* at 1742. The Court also noted that "[c]ommon sense teaches . . . that familiar items may have obvious uses beyond their primary purposes, and in many cases a person of ordinary skill will be able to fit the teachings of multiple patents together like pieces of a puzzle." *Id.* "A person of ordinary skill is also a person of ordinary creativity, not an automaton." *Id.*

Furthermore, the Supreme Court explained that "[w]hen there is a design need or market pressure to solve a problem and there are a finite number of identified, predictable solutions, a person of ordinary skill has good reason to pursue the known options within his or her technical grasp." *KSR*, 127 S. Ct. at 1742. "If this leads to the anticipated success, it is likely the product not of innovation but of ordinary skill and common sense," *id.* and, in such an instance "the fact that a combination was obvious to try might show that it was obvious under § 103" *Id.*

The Federal Circuit concluded that it would have been obvious to combine (1) a device for actuating a phonograph to play back sounds associated with a letter in a word on a puzzle piece with (2) a processor-driven device capable of playing the sound associated with a first letter of a word in a book. *Leapfrog Enters., Inc. v. Fisher-Price, Inc.*, 485 F.3d 1157, 1161 (Fed. Cir. 2007). In reaching that conclusion, the Federal Circuit recognized that "[a]n obviousness determine is not the result of a rigid formula disassociated from the consideration of the facts of a case. Indeed, the common sense of those skilled in the art demonstrates why some combinations would have been obvious where others would not." *Id.* at 1161 (citing *KSR*, 127 S. Ct. 1727, 1739 (2007)).

Although the combination of prior art references lacked a "reader" to automatically identify the book inserted in the device, the Federal Circuit found no error in the District Court's determination that readers were well known in the art at the time of the invention. *Id.* at 1162. In addition, the Court found that the reasons for adding a reader to the combination of prior art references "are the same as those for using readers in other children's toys-namely, providing an added benefit and simplified use of the toy for the child in order to increase its marketability." *Id.* at 1162. The Federal Circuit relied in part on the fact that Leapfrog had presented no evidence that the inclusion of a reader in the combined device was "uniquely challenging or difficult for one of ordinary skill in the art" or "represented an unobvious step over the prior art." *Id.* (citing *KSR*, 127 S. Ct. at 1740-41).

FINDINGS OF FACT

1. Heinonen teaches an interactive home terminal system which makes use of a television, video tape recorder, and a telephone. Abstract.
2. Heinonen's system is such that the telephone is connected to an interface, item 7, which makes conversions between data format of the mobile phone and that of the television and video tape recorder. The interface item also includes a charger for the phone. Col. 3, ll. 27-33.
3. The interface connects to the phone via a telephone manufacturer specific connector, item 32, to transfer data. Heinonen, col. 3, ll. 50-52.
4. Heinonen states that for device 30 to operate as a charger (in Figure 3, interface item 7 of Figure 1 is referred to as item 30, see col. 3, ll. 44-45) a power supply must be included. Alternatively, item 30 may just be a desktop stand and it will receive power from a separate battery charger (i.e., one embodiment the data transfer function of item 30 is separate from the charger). Col. 4, ll. 40-48.
5. Heinonen also states that connector, item 32, may be a data adaptor, also known as a data card. Col. 4, ll. 48-55.
6. Heinonen teaches that the advantage of the system is:
[I]t brings certain electrical services requiring bidirectional communications in a new manner available to a very large group of consumers. Consumers can use TVs and video tape recorders already in their homes by acquiring an interface unit by means of which a mobile phone or other terminal of a bidirectional communications system is connected to the home terminal equipment.

Col. 7, ll. 3-9.

7. Tran teaches a data management system which allows a user to store information on a portable computer processing system. Abstract.

8. The portable computer is housed in a small enclosure, and includes cellular phone services. Tran, col. 5, ll. 1-5, col. 7, ll. 59-63.
9. The portable computer can communicate with a display device (TV, item 52, Figures 1 & 3) via a wireless link. Tran, col. 14, ll. 41-56.
10. The Examiner has found, and Appellants have not contested, that the use of Bluetooth protocol for wireless connection between a mobile device and another device is well known. Answer 5.
11. The Examiner has further found, and Appellants have not contested, that the general purpose of wireless links using Bluetooth is the elimination of wires, cables, and connectors between such links. Answer 5.
12. As Facts 10 and 11 are not contested by Appellants, we view them as admitted facts. We additionally note that Appellants' Specification on page 7, line 27 appears to support the Examiner's finding that the Bluetooth protocol was known at the time of the invention. We further note that, as is apparent from the term "wireless" technology, an advantage of wireless technology is the elimination of wires.

ANALYSIS

Initially, we note that Appellants' Brief has grouped all of the rejected claims together; accordingly we select claim 34 as representative of the rejected claims.

Appellants' arguments have not persuaded us that the Examiner erred in concluding that it would have been obvious to modify Heinonen to use a wireless protocol such as Bluetooth. Claim 34 recites "transmitting the signal [generated in the phone] that conforms to a Bluetooth-protocol as an

output signal from the mobile phone.” Thus, we note that claim 34 does not explicitly recite a wireless link. Nonetheless, both the Examiner and the Appellants agree that the use of Bluetooth protocol for wireless connection between a mobile device and another device is well known. Fact 10. Thus, we consider it established that the scope of the term Bluetooth protocol includes that the transmission is wireless.

The Examiner has found that Heinonen discloses transmitting a signal from a mobile phone to a module which in turn converts the signal to a format that is displayed on the television. Answer 4. We find ample evidence to support this finding by the Examiner. Facts 1 and 2. The Examiner identifies that Heinonen does not teach using Bluetooth, but finds that Tran is analogous art, in that it teaches a telecommunications device that communicates video information wirelessly to a television. Answer 4. We find the evidence supports the Examiner’s findings directed to Tran. Facts 7 through 9. The Examiner further finds that the use of the specific Bluetooth protocol is well known. Answer 5. This finding is not contested. Fact 10. Based upon these findings the Examiner has found that it would have been obvious to use a Bluetooth wireless protocol in Heinonen’s system to communicate the video signals to the module. Answer 5. The Examiner provides several reasons why one skilled in the art would perform this modification, i.e., providing greater mobility and flexibility and allowing the system to conform to a widely known protocol without the need for physical connections. Answer 5.

We concur with the Examiner’s conclusion of obviousness. Appellants’ contentions focus on the Heinonen reference in asserting that one would not use Bluetooth protocol in the device, however this line of

argument overlooks that there are other teachings in the art which are also relied upon in the Examiner's rejection of claim 34. The Examiner in rejecting claim 34 has conformed to the requirements set forth in *Graham*. As discussed in the preceding paragraph, the Examiner has identified the scope and content of the prior art, the differences between the claim and the prior art, and determined that the differences are within the level of skill in the art. Further, the Examiner has provided an articulated rationale for combining the features taught by the prior art, i.e., providing greater mobility and flexibility and allowing the system to conform to a widely known protocol without the need for physical connections.

Appellants' assertion that the combination is improper because the prior art does not provide the motivation for the combination is not well founded since the Supreme Court has discouraged such a rigid test for obviousness. *See KSR*, 127 S. Ct. at 1741. Rather, the question is whether it is a predictable use of the prior art elements according to their established functions. In *Heinonen*, one of the purposes of the connector, item 32, is to communicate video information from the telecommunications device to the module. Fact 3. *Tran* teaches that it is known to use wireless transmission of video information from a telecommunication device to the module. Fact 9. Additionally, it was known in the art that Bluetooth is a wireless communication protocol used by telecommunications devices to communicate wirelessly with another device. Fact 10. The purpose of wireless communication, such as wireless communication using the Bluetooth protocol, is to eliminate wired communication. Facts 11 and 12. Given these facts, we consider it to be predictable that one skilled in the art would use wireless communication using the Bluetooth wireless protocol as

a substitute for Heinonen's wired connection, via connector, item 32, as such a modification would just be using the prior art communications methods for their established functions with no unpredictable results.

That the connector, item 32, is also used in conjunction with the charging of the phone, a function that Bluetooth wireless communication can not accomplish, does not detract from this conclusion. Heinonen also teaches that in one embodiment the module, item 30, may be just a desktop stand with a data transfer function and the charger can be separate. Facts 4 and 5. Thus, we find that the skilled artisan would recognize that the data and power transfer connections can be separated.

Further, Appellants' assertion that the combination would defeat the purpose of Heinonen as it adds complexity, which is contrary to Heinonen's purpose, is not persuasive of error. Heinonen's statements regarding reducing complexity are directed to allowing a user to use existing television and VCR equipment in the system. Fact 6. In Heinonen's system the module 30 is the new element to the user, thus, using the module with a wired or wireless connection to the phone would not introduce any additional complexity to the user as the module 30 will be a new piece of equipment in either case.

For the all of the above reasons, Appellants' arguments have not persuaded us that the Examiner erred in concluding that it would have been obvious to modify Heinonen to use a wireless protocol such as Bluetooth. Thus, we sustain the Examiner's rejection of claims 34 through 37 under 35 U.S.C. § 103(a) as being unpatentable over Heinonen in view of Tran.

ORDER

The decision of the Examiner is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED

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